MAINTENANCE ADVISORY
Shock Mount Failures on MEP-903A 10kW Auxiliary Power Units (APUs)

Failures have been repeatedly observed for the shock mounts supporting the engine and alternator on MEP-903A model 10kW APUs. Both new and used APUs have shown the tendency of engine and alternator shock mount failure (collapse). Investigation is currently underway to determine if failure of the shock mounts is also related to an increase in reported APU radiator failures. Without the dampening provided by functioning shock mounts, vibrations during long road trips may be transmitted into the APU frame to its radiator resulting in cracks and leaks. Failed shock mounts may also result in excessive vibration being transmitted into the SICPS shelter.

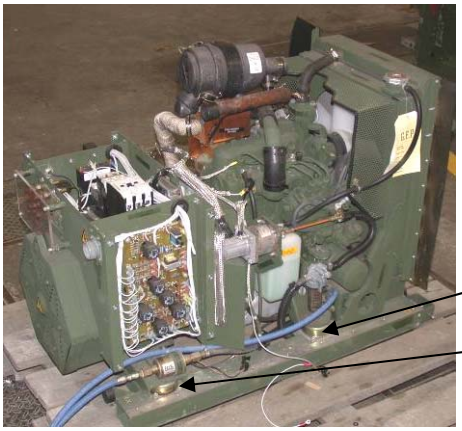
Requirements for the loaded/compressed height of the mounts have not been defined, but as shown in the figures below, failure is clearly evident upon visual inspection. The observed normal height of the mounts under load is 1.250 inches, measured from the top of the shock mount to the top of the mounting base. In most cases, the failed shock mount is compressed to the extent that its rubber elastomer touches the top of its mounting base.

In light of these recurring failures, an initial visual inspection of all 4 shock mounts (both the engine & alternator mounts) should be performed as part of operator PMCS, followed by additional inspections every 100 hours in conjunction with the recommended oil change interval for the 10 kW APU.

a   **b**

Figure 1. (a) Functioning shock mount**, (b)** Failed/collapsed shock mounts

If a shock mount is observed to have failed per a visual inspection, units should acquire a replacement mount per the recommended part numbers in the table below. Please note that engine and alternator mounts are different since the mounts have different damping characteristics and were selected for the loading tendencies at their respective locations. **Part numbers corresponding to the engine mounts should not be used as replacements for the alternator mounts and vice versa.**



Mount Location	Manufacturer	Mfr. Part No.	NSN
Engine	Barry Controls	C2090-T6	5342-00-597-6190
Alternator	Barry Controls	C2040-T6	5342-00-684-9456

Figure 2. MEP-903A 10kW APU, partially disassembled